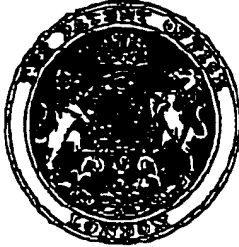


REST

## PATENT SPECIFICATION

749,999

*Inventors:—SIDNEY AQUILLA POLTON and PERCY OSBORNE BRIERLY.**Date of filing Complete Specification : Jan. 14, 1954.**Application Date : Oct. 18, 1952. No. 26195/52.**Complete Specification Published : June 6, 1955.**Index at Acceptance :—Class 52(4), M1D.*

## COMPLETE SPECIFICATION.

## Improvements in or relating to Mattresses, Cushions and the like.

We, HEAL & SON LIMITED, a British Company, of 196 Tottenham Court Road, London, W.1, do hereby declare this invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:

The present invention relates to mattresses, cushions and the like and has for its object to provide an improved construction of mattress or cushion (hereinafter referred to simply as a mattress) having one side or supporting surface which is soft and a reverse side or supporting surface which is comparatively firm so that by turning the mattress over, one or other of said surfaces can be brought uppermost to suit personal requirements. Further objects of the invention are to provide a mattress of this nature wherein both supporting surfaces are suitably supported over substantially the whole of their areas so that each surface remains level after continual use; to provide for adequate ventilation between the surfaces; to provide relatively firm edges on both sides of the mattress to avoid permanent distortion of the mattress, caused by people sitting on the said edges thereof, and to fit a tick or cover to the mattress in such a manner that the tick is held against unintentional movement relatively to the mattress.

It is not broadly new to make cushions or mattresses having different materials for each broad face but the present invention differs from the art shown in Specifications Nos. 410,977; 481,234 and 687,625 in that, among other things, one side of the mattress is made of foamed latex, the other side of rubberized hair and that the surfaces of said sides are substantially flat because each component is a flat surfaced slab-like piece. Thus when the invention is applied to a cushion the resulting article is a flat slab or squab and not of the shape generally termed

"cushion shape". In one construction according to the invention, one slab has upstanding walls to provide a tray-shaped recess to receive the other slab but the presence of the said walls does not materially affect the general slab-like shape of the slab in question.

According to the invention there is provided a reversible flat surfaced mattress of slab-like shape comprising in combination a slab of foamed rubber latex secured to a slab of rubberized hair, the adjacent faces of the two components being interrupted by cavities to provide air spaces within the body of the mattress.

One slab may have upstanding side walls to provide a recess or cavity to receive the other slab. An absorbent layer of wool, felt, or other suitable material may be provided between the rubberised hair slab and an outer cover.

Further, according to the invention, the mattress comprises a slab of foamed rubber latex and a slab of rubberised hair, the edges of the latter slab being formed with upstanding shallow side walls, forming a boundary for the edges of the slab of foamed rubber latex and to which said edges are bonded, and wherein the face of the rubberised hair slab opposed to the foamed rubber latex slab is formed or provided with ribs which form air passages between themselves and said opposed faces of the two layers.

The rubberised hair material is made up in sheet or block form, is compressible, and easily cut into slabs to suit requirements.

In order that the invention may be clearly understood and readily carried into effect, reference will now be made to the accompanying drawings which illustrate a preferred embodiment of the invention by way of example, and wherein:—

Figure 1 is a perspective view of the

complete mattress with an outer cover therefor omitted:

Figure 2 is a fragmentary view drawn to a larger scale and showing part of the mattress in cross-section.

Referring to the drawings, the mattress comprises a layer or slab of rubberised hair 1 which is formed at its edges with shallow upstanding side walls 2 so that the rubberised hair component resembles a shallow tray. The inner face of this slab 1 of rubberised hair is fitted or formed with a plurality of ribs or webs 3 which are spaced apart in parallelism and extend longitudinally of the mattress and support a slab 5 of foamed rubber latex in the manner described below. In this way the adjacent faces of the two components are interrupted by cavities 4 which provide air passages or spaces which open at their ends through the tray walls 2 to permit a free flow of air through the mattress. The upper faces 3a of these ribs or webs 3 are below the upper faces 2a of the side walls 2 of the slab of rubberised hair and these ribs 3, in addition to forming air passages 4, also constitute supports for the slab of foamed rubber latex 5 which seats on the ribs 3 and has its upper surface 5a flush with the upper faces 2a of the shallow side walls 2 of the slab of rubberised hair 1. The side edges 5b of the slab of foamed rubber latex 5 are preferably bonded to the inner faces 2b of the said side walls 2 and, if desired, the lower or inner surface 5c of the slab of foamed rubber latex 5 may be bonded to the upper faces 3a of the ribs 3 where it contacts the latter.

The outer lower face 1a and the outer faces of the side walls 2 of the slab of rubberised hair are preferably upholstered with wool or cotton felt and button tufted. If desired, an absorbent layer of wool, felt, or other suitable material (not shown) may be provided between the slab of foamed rubber latex 5 and an outer cover.

The entire mattress is encased in a tick or cover (not illustrated) and the edges of the tick may be stitched to the outer faces of the side walls 2 of the slab of rubberised hair by the normal two inch mattress side stitching. The tick is thus retained in position and cannot possibly slip around the mattress. It is preferred, although not essential, to use best quality white rubberised hair and not the normal grey.

From the foregoing it will be appreciated that the various objects of the invention are achieved. The foamed rubber latex side 5 of the mattress provides a soft supporting surface and by reversing the mattress and bringing the rubberised hair side 1 uppermost a comparatively firm supporting surface is obtained. The said ribs or webs 3 between the two layers 1 and 5, act to support the foamed rubber latex between oppo-

site sides and so prevent any undesirable sagging of the foamed rubber latex while permitting the latter to yield under load. The ribs or webs 3 also define air passages 4 through which air can pass along the complete length of the mattress between the layers while the walls 2 at the edge of the rubberised hair slab provide, in effect, a relatively firm border or surround to the latex slab.

What we claim is:—

1. A reversible flat-surfaced mattress of slab-like shape comprising in combination a slab of foamed rubber latex secured to a slab of rubberised hair, the adjacent faces of the two components being interrupted by cavities to provide air spaces within the body of the mattress.

2. A mattress as claimed in Claim 1 wherein one slab has upstanding walls to provide a recess in which the other slab is seated.

3. A reversible mattress according to Claim 2, comprising a slab of foamed rubber latex and a slab of rubberised hair the edges of the latter slab being formed with upstanding shallow side walls forming a boundary for the edges of the slab of foamed rubber latex and to which said edges are bonded, and wherein the face of the rubberised hair slab opposed to the foamed rubber latex slab is formed or provided with ribs which form air passages between themselves and said opposed faces of the two layers.

4. A reversible mattress according to Claim 3, wherein said air passages extend longitudinally of the mattress.

5. A reversible mattress according to Claim 3 or 4 wherein the ribs formed of the rubberised hair material have their faces adjacent to the face of the slab of foamed rubber latex bonded thereto.

6. A reversible mattress according to any of the preceding claims, wherein the outer flat face of the layer of rubberised hair is upholstered with wool or cotton felt, and a tick or cover fixed to the mattress and the upholstered surface button tufted.

7. A reversible mattress according to any of the preceding claims, wherein an absorbent layer of wool, felt, or other suitable material is provided between the outer face of the slab of rubber latex and an outer cover or tick.

8. A reversible mattress according to Claim 6 or 7, wherein the edges of the tick are stitched to the sides of the slab of rubberised hair.

9. A reversible mattress, constructed substantially as hereinbefore described with reference to the accompanying drawings.

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3

## PROVISIONAL SPECIFICATION.

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We, HEAL & SON LIMITED, a British Company, of 196 Tottenham Court Road, London, W.1, do hereby declare this invention to be described in the following statement:—

The present invention relates to mattresses, cushions and the like and has for its object to provide an improved construction of mattress or cushion (hereinafter referred to simply as a mattress) having one side or supporting surface which is soft and a reverse side or supporting surface which is comparatively firm so that by turning the mattress over one or other of said surfaces can be brought uppermost to suit personal requirements. Further objects of the invention are to provide a mattress of this nature wherein both supporting surfaces are suitably supported over substantially the whole of their areas so that each surface remains level after continual use; to provide for adequate ventilation between the surfaces, to provide relatively firm edges on both sides of the mattress to avoid permanent distortion of the mattress, caused by people sitting on the said edges thereof, and to fit a tick or cover to the mattress in such a manner that the tick is held against unintentional movement relatively to the mattress.

According to the present invention there is provided a reversible mattress, cushion or the like which comprises on one side a supporting surface of rubber latex and on the other side a supporting surface of rubberised hair, and wherein the opposed inner faces of the rubber latex and the rubberised hair are spaced apart by means which form a plurality of air passages. Preferably an absorbent layer of wool, felt, or other suitable material is provided between the rubber latex and an outer cover.

According to a preferred form of the invention, the mattress comprises a normally upper layer of rubber latex and a normally lower layer of rubberised hair material, the edges of the latter layer being formed with upstanding shallow side walls, forming a boundary for the edges of the layer of rubber latex and to which said edges are bonded, and wherein the face of the rubberised hair material opposed to the rubber latex is formed or provided with ribs which form air passages between themselves and said opposed faces of the two layers.

The rubberised hair material is made up in sheet or block form, is compressible, and easily cut to suit requirements.

To enable the invention to be clearly

understood an embodiment thereof will now be described by way of example.

According to this embodiment the mattress comprises a normally lower layer of rubberised hair which is formed at its edges with shallow upstanding side walls so that the layer of rubberised hair resembles a shallow tray. The inner or upper face of this layer of rubberised hair is fixed or formed with a plurality of ribs or webs which are spaced apart in parallelism and extend longitudinally of the mattress to provide between themselves air passages or spaces which are open at their ends to permit a free flow of air through the mattress. The upper faces of these ribs or webs are below the upper faces of the side walls of the layer of rubberised hair and these ribs, in addition to forming air passages, also constitute supports for a layer of rubber latex which seats on the ribs and has its upper surface flush with the upper faces of the shallow side walls of the lower layer of rubberised hair.

The side edges of the layer of rubber latex are preferably bonded to the inner faces of the said side walls and, if desired the lower or inner surface of the layer of rubber latex may be bonded to the upper faces of the ribs where it contacts the latter.

The outer lower face of the layer of rubberised hair is preferably upholstered with wool or cotton felt and is button tufted. No upholstery or ties need be applied to the latex side.

The entire mattress is encased in a tick or cover and the edges of the tick may be stitched to the outer faces of the side walls of the layer of rubberised hair by the normal two inch mattress side stitching. The tick is thus retained in position and cannot possibly slip around the mattress. It is preferred, although not essential, to use best quality white rubberised hair and not the normal grey.

From the foregoing it will be appreciated that the various objects of the invention are achieved. The rubber latex side of the mattress provides a soft supporting surface and by reversing the mattress and bringing the rubberised hair side uppermost a comparatively firm supporting surface is obtained. The said ribs or webs between the two layers act to support the rubber latex between opposite sides and so prevent any undesirable sagging of the rubber latex while permitting the latter to yield under load. The ribs or webs also define air passages through which air can pass along the

4

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complete length of the mattress between the  
layers while the walls at the edge of the  
rubberised hair layer provide, in effect, a  
relatively firm border or surround to the  
5 latex layer.

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## 749.999 COMPLETE SPECIFICATION

1 SHEET

This drawing is a reproduction of  
the Original on a reduced scale.

Fig. 1.

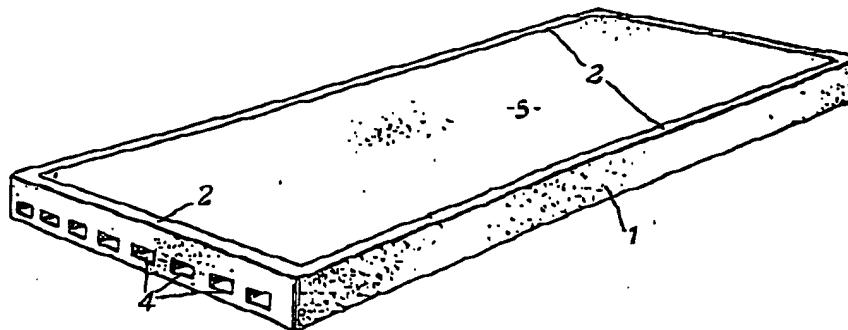


Fig. 2.

